



Dart Hawkesbury  
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada  
Tel (613) 632-5200

## Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Serial No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name	
PO37862	TWM001-VU	1	1	Net 30	M2024T3T1-000W.065	2024T3 Tubing 1" OD x 0.65" Thick				36		36		S000955	Stock	10/18/2017	\$ 7.50 / ft	0		\$270.00	TW Metals	
		2	M304TR0.500W.035		304 Round Tube .500 X .035W : MATERIAL: AISI 304/316 SS SEAMLESS ROUND TUBING AS PER ASTM A213 OR ASME SA213 OR ASTM A269			20		20		S000956	Stock	10/18/2017	\$ 1.50 / pcs	0		\$30.00	TW Metals			
		3	M304TR0.500W.049		304 Round Tube .500 X .049W : MATERIAL: AISI 304/316 SS SEAMLESS ROUND TUBING AS PER ASTM A213 OR ASME SA213 OR ASTM A269					20		S000957	Stock	10/18/2017	\$ 2.80 / pcs	0		\$56.00	TW Metals			
		4	M304TR0.750W.049		304 Round Tube .750 X .049W : MATERIAL: AISI 304/316 SS SEAMLESS ROUND TUBING AS PER ASTM A213 OR ASME SA213 OR ASTM A269			160		160		S000958	Stock	10/18/2017	\$ 2.10 / pcs	0		\$336.00	TW Metals			
		5	M6061T6T0.3125W.058		Aluminum Tube .3125 X .058W : MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING AS PER WW-T-700/8 OR QQ-A-200/8 OR QQ-A-225/8 OR AMS 4080 OR AMS 4083 OR ASTM B210 OR ASTM B241			60		60		S000959	Stock	10/18/2017	\$ 2.50 / pcs	0		\$150.00	TW Metals			
		7	M6061T6T0.500W.058		6061-T6 Round Tube .500 X .058W : MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING AS PER WW-T-700/8 OR QQ-A-200/8 OR QQ-A-225/8 OR AMS 4080 OR AMS 4083 OR ASTM B210 OR ASTM B241			100		108		S000960	Stock	10/18/2017	\$ 1.75 / pcs	0		\$189.00	TW Metals			
Total:										396		404									\$1,031.00	



O'Neal High-Performance Metals Group



**Packing  
Slip**

ORDER NO.: 60640787 FROM: CRAN PAGE 1

CUST NUMBER: 1203820 NET WGT: 88.612 REQ.DATE: 10/09/17 CONFIRMED  
SOLD TO: SHIP TO:  
DART AEROSPACE LTD DART AEROSPACE LTD  
1270 ABERDEEN ST 1270 ABERDEEN ST  
HAWKESBURY ON HAWKESBURY ON  
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 10/04/17  
TERMS: NET 30 DAYS VIA: COMMON CARRIER  
F.O.B.: SHIPPING POINT FREIGHT: PREPAID  
CUST ORD NO.: PO37862 RELEASE NO.:  
RECEIVING PHONE:

LINE ITEM DESCRIPTION WIDTH LENGTH  
0001 43260 D2024-T3 1 OD X .065 WA 12 FT ML

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	36.000 FT	36.000 FT	36.000 FT	8.243	

\*\* 1 TEST REPORTS REQUIRED \*\*  
\*\* 1 CERTS REQUIRED \*\*  
ECCN: EAR99 Export License: NLR Expiration Date: 0/00/00  
PO:49341478 HT:F002012480001 PC: 3 CUSTOMER QTY: UOM  
MLT:UNITED STATES MFG:UNITED STATES SLB/CL:219348

0002 36449 SMLS CD 304/L A269 1/2 OD X .035 WA 20' ML

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	20.000 FT	20.000 FT	20.000 FT	3.475	

\*\* 1 TEST REPORTS REQUIRED \*\*  
\*\* 1 CERTS REQUIRED \*\*  
ECCN: 2B999.g Export License: NLR Expiration Date: 0/00/00  
PO:49366482 HT:YX1608590 PC: 1 CUSTOMER QTY: UOM  
MLT:CHINA MFG:CHINA SLB/CL:3-93

0003 36506 SMLS CD 304/L A269 1/2 OD X .049 WA 20' ML

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	20.000 FT	20.000 FT	20.000 FT	4.718	

\*\* 1 TEST REPORTS REQUIRED \*\*  
\*\* 1 CERTS REQUIRED \*\*  
ECCN: 2B999.g Export License: NLR Expiration Date: 0/00/00  
PO:49336439 HT:YX1506712 PC: 1 CUSTOMER QTY: UOM  
MLT:CHINA MFG:CHINA SLB/CL:12-19

*SPR-10-18*

**THANK YOU FOR THIS ORDER**

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE  
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL  
REVIEW.  
<http://www.twmetals.com/invoice-terms.html>



O'Neal High-Performance Metals Group



Packing Slip

ORDER NO.: 60640787

FROM: CRAN

PAGE 2

CUST NUMBER: 1203820 NET WGT: 88.612 REQ.DATE: 10/09/17 CONFIRMED  
SOLD TO: SHIP TO:  
DART AEROSPACE LTD DART AEROSPACE LTD  
1270 ABERDEEN ST 1270 ABERDEEN ST  
HAWKESBURY ON HAWKESBURY ON  
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 10/04/17  
TERMS: NET 30 DAYS VIA: COMMON CARRIER  
F.O.B.: SHIPPING POINT FREIGHT: PREPAID  
CUST ORD NO.: PO37862 RELEASE NO.:  
RECEIVING PHONE:

LINE ITEM DESCRIPTION WIDTH LENGTH  
0004 36860 SMLS CD 304/L A269 3/4 OD X .049 WA 20' CL

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	160.000 FT	160.000 FT	160.000 FT	58.675	

\*\* 1 TEST REPORTS REQUIRED \*\*  
\*\* 1 CERTS REQUIRED \*\*

ECCN: 2B999.g Export License: NLR Expiration Date: 0/00/00  
PO:49342471 HT:YX1501783 PC: 8 CUSTOMER QTY: UOM  
MLT:CHINA MFG:CHINA SLB/CL:11-63

0005 41723 D6061-T6 5/16 OD X .058 WA 12 FT ML

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	60.000 FT	60.000 FT	60.000 FT	3.276	

\*\* 1 TEST REPORTS REQUIRED \*\*  
\*\* 1 CERTS REQUIRED \*\*

ECCN: EAR99 Export License: NLR Expiration Date: 0/00/00  
PO:49373738 HT:2289533 PC: 5 CUSTOMER QTY: UOM  
MLT:UNITED STATES MFG:UNITED STATES SLB/CL:461694

0006 42276 D6061-T6 1/2 OD X .058 WA 12 FT ML

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	100.000 FT	108.000 FT	108.000 FT	10.225	

\*\* 1 TEST REPORTS REQUIRED \*\*  
\*\* 1 CERTS REQUIRED \*\*

ECCN: EAR99 Export License: NLR Expiration Date: 0/00/00  
PO:49365548 HT:F002361250001 PC: 9 CUSTOMER QTY: UOM  
MLT:UNITED STATES MFG:UNITED STATES SLB/CL:222661

SEP-10-18

THANK YOU FOR THIS ORDER

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O'Neal High-Performance Metals Group



# Packing Slip

ORDER NO.: 60640787

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PAGE 3

CUST NUMBER: 1203820    NET WGT: 88.612    REQ.DATE: 10/09/17    CONFIRMED  
 SOLD TO:    SHIP TO:  
 DART AEROSPACE LTD    DART AEROSPACE LTD  
 1270 ABERDEEN ST    1270 ABERDEEN ST  
 HAWKESBURY ON    HAWKESBURY ON  
 CANADA    CN K6A 1K7    ONTARIO CANADA    CN K6A 1K7

SALESPERSON: DONNA SMALLEY    SHIP BY: 10/04/17  
 TERMS: NET 30 DAYS    VIA: COMMON CARRIER  
 F.O.B.: SHIPPING POINT    FREIGHT: PREPAID  
 CUST ORD NO.: PO37862    RELEASE NO.:  
 RECEIVING PHONE:

LINE    ITEM DESCRIPTION    WIDTH    LENGTH  
 BROKERS    KUEHNE AND NAGEL LTD

-----		PACK INFO -----				
AREA	TYPE OF PKG	PKGS	GRS WEIGHT	WIDTH	LENGTH	HGHT
NEW PEN	REDDICRATE	1.000	148.612	4.0000	246.0000	4
		Box No - TWPK17006722				
		1.000	148.612			

BY: Thomas Burgess  
 RT 000-

UNLOAD TYPE: NONE SPECIFIED

DATE SHIPPED \_\_\_\_\_

DATE FILLED \_\_\_\_\_

## THANK YOU FOR THIS ORDER

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SOLD TO: SHIP TO:  
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1270 ABERDEEN ST 1270 ABERDEEN ST  
HAWKESBURY ON HAWKESBURY ON  
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 10/04/17  
TERMS: NET 30 DAYS 27 ENGLEHARD DRIVE  
F.O.B.: SHIPPING POINT MONROE TWP NJ 08831  
CUST ORD NO.: PO37862  
VIA: COMMON CARRIER  
FREIGHT: PREPAID  
RELEASE NO.:  
RECEIVING PHONE:

"TW Metals MSDS data is available on our web site at [www.twmetals.com](http://www.twmetals.com). MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

## "CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material"

Authorized Test Report Clerk Cgm Manner Date: 9/28/17

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

1

**THANK YOU FOR THIS ORDER**

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL REVIEW.  
<http://www.twmetals.com/invoice-terms.html>

# KAISER ALUMINUM FABRICATED PRODUCTS

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
6573 W. WILLIS ROAD  
CHANDLER, AZ 85226

CUSTOMER PO NUMBER: M49341478-1		CUSTOMER PART NUMBER: 43260		PRODUCT DESCRIPTION: Drawn Seamless Tube/Pipe	
KAISER ORDER NUMBER: 219348	LINE ITEM: 001	SHIP DATE: 11/02/2015	KAISER LOT NUMBER: F00201248	ALLOY: 2024	TEMPER: T3
WEIGHT SHIPPED: 379.000 LB	QUANTITY: 138.000 PCS	B/L NUMBER: 220262	DIAM/DAF/THKNS: 	WIDTH: 	LENGTH: 12.000 FT
SHIP TO: TW METALS INC 27 ENGLEHARD DRIVE EXIT 8A OFF NJ TPK MONROE TWP, NJ 08831 USA			SOLD TO: TW METALS INC 760 CONSTITUTION DRIVE SUITE 204 EXTON, PA 19341 USA		

### Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CON% IACS	BEND
F00201248	0001	1	69.9	50.0	22.5	N/A	N/A	N/A

### Chemical Composition (wt%), Aluminum Remainder

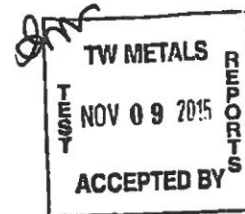
LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.50	0.50	4.90	0.90	1.80	0.10	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.00	0.00	3.80	0.30	1.20	0.00	0.00	0.00	NA	NA	NA	0.00	0.00
D82179	.10	.14	4.60	.72	1.36	.01	.05	.02	.00	.00	.01	.05	.06

### Applicable Requirements:

Description: OD: 1.0000"; Wall: 0.0650"; Round @  
AMS-4088K AMS-WW-T-700/3A ASTM B210-12 DAS  
This Product Complies to FAR BAA, DFARS BAA, FAR TAA  
COMPLIES TO DIN EN 10204 JAN 2005 9-60  
No Weld Repair. Mercury Free.

### Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA  
MATERIAL COMPLIES WITH FAR BAA (FAR 52.225-1, BUY AMERICAN ACT- SUPPLIES), DFARS BAA  
(DFARS 252.225-7001 BUY AMERICAN ACT & BAL OF PAYMENTS PROG), AND FAR TAA (FAR 52.225-5  
TRADE AGREEMENTS).



Plant Serial: 00020683  
Kaiser Order Number: 219348  
Line Item: 001

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

*Best in Class*

**CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
6573 W. WILLIS ROAD  
CHANDLER, AZ 85226

**CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file subject to examination.

Nathaniel Stevens, Quality Manager





## MILL TEST REPORT

Purchaser.: TW METALS-Cranbury				Certificate No.: 2017-6-89					
Contract No.: TWM P.O.No.: M49366482				Date of Issue.: 2017.6.12					
Commodity: Stainless Steel Seamless Tubes				Specifications: ASTM A213-15c/ASME SA213-15/ASTM A269-15a EAW					
Process: Cold Drawn				Delivery Condition: OD Polished to 240 Grit					
Steel Grade	Heat Number	Lot Number	Dimensions	Quantity					
				Pieces	Feet				
TP304/TP304L	YX1608-590	3-93	1/2"x0.035"x20'	1000	20,000				
Chemical Composition by Weight (%)									
Element	C	Mn	P	S	Si	Cr	Ni	Mo	Co
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	18.00-20.00	8.00-12.00	-	-
Ladle Analysis	0.017	1.28	0.033	0.002	0.35	18.22	8.06	-	-
Product Analysis	0.022	1.27	0.035	0.004	0.38	18.36	8.09	-	-
Mechanical Properties									
Test Item	Elongation (% in 2")		Tensile Strength (PSI) Rm			Yield Strength (PSI) Rp / 0.2%			
Requirements	≥35		≥75,000			≥30,000			
Test Results	61/62		99,000/100,000			45,000/46,000			
Test Item	Reduction of Area Z (%)	Hardness	Cold Bend Test	Flaring Test	Flattening Test	Flange Test	P.M.I. Test		
Requirements	-	HRB≤80	-	22%	e=0.09	-	-		
Test Results	-	77/79	-	Passed	Passed	-	OK		
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection				
Requirements	ASTM E 426	-	-	ASTM A262 E	End Cut	Appearance			
Test Results	Passed	-	-	OK	OK	OK			

ISO 9001:2008 Certified by CAS 117 16 QU 0053-06 ROS

PED Certified by SZUTEST 2195-PED-1526002

## Additional Remarks:

- (1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes
- (2) All tubes tested per ASTM A1016-14
- (3) Materials is NACE MR0103-2007 compliant (per Section 2.5)
- (4) Materials is NACE MR0175/ISO 15156-2003 compliant (per Section 4.2.1)
- (5) In Compliance with EN 10204-3.1
- (6) In Compliance with RoHS Stipulation
- (7) No weld repair performed
- (8) Free from mercury contamination
- (9) Free from radioactive contamination
- (10) Billets melt and pipes/tubes manufactured in China
- (11) All tubes 100% PMI tested
- (12) All tubes 100% Eddy Current tested

**CANNOT CERTIFY COMPLIANCE  
FAR BAA / DFARS BAA / FAR TAA**



By:

James Shi

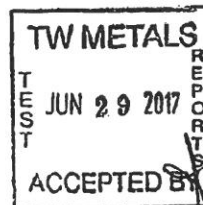
James Shi / Manager

Quality Control Department

We hereby certify that this report is true and correct.

Jiangsu Pufa Stainless Steel Tube Co., Ltd.

No. 99, Xuean Middle Road, Dongchen Town, Rugao City, Jiangsu Province, P.R.China





PUFA™

Producer of Premium Stainless Steel Seamless Tubes

# MILL TEST REPORT

Purchaser.: TW METALS-Carol Stream				Certificate No.: 16-1-92					
Contract No.: TWM P.O.No.: M49336439				Date of Issue.: 2016.1.5					
Commodity: Stainless Steel Seamless Tubes				Specifications: ASTM A213-15c/ASME SA213-15/ASTM A269-15a EAW					
Process: Cold Drawn				Delivery Condition: OD Polished to 240 Grit					
Steel Grade	Heat Number	Lot Number	Dimensions	Quantity					
				Pieces	Feet				
TP304/TP304L	YX1506-712	12-19	1/2" x 0.049" x 20'	2300	46,000				
Chemical Composition by Weight (%)									
Element	C	Mn	P	S	Si	Cr	Ni	Mo	Co
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	18.00-20.00	8.00-12.00	-	-
Ladle Analysis	0.013	0.65	0.032	0.002	0.32	18.28	8.05	-	-
Product Analysis	0.017	0.61	0.033	0.002	0.28	18.31	8.55	-	-
Mechanical Properties									
Test Item	Elongation (% in 2")	Tensile Strength (PSI)		Yield Strength (PSI)					
		Rm	Rp / 0.2%						
Requirements	≥35	≥75,000	≥30,000						
Test Results	63/64	97,000/98,000	43,000/44,000						
Test Item	Reduction of Area Z (%)	Hardness	Cold Bend Test	Flaring Test	Flattening Test	Flange Test	P.M.I. Test		
Requirements	-	HRB≤80	-	22%	e=0.09	-	-		
Test Results	-	77/79	-	Passed	Passed	-	OK		
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection				
Requirements	ASTM E 426	-	-	ASTM A262 E	End Cut	Appearance			
Test Results	Passed	-	-	OK	OK	OK			

ISO 9001:2008 Certified by Intertek 110703068

PED Certified by SZUTEST 2195-PED-1526002

## Additional Remarks:

- (1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes
- (2) All tubes tested per ASTM A1016-14
- (3) Materials is NACE MR0103-2007 compliant (per Section 2.5)
- (4) Materials is NACE MR0175/ISO 15156-2003 compliant (per Section 4.2.1)
- (5) In Compliance with EN 10204-3.1
- (6) In Compliance with RoHS Stipulation
- (7) No weld repair performed
- (8) Free from mercury contamination
- (9) Free from radioactive contamination
- (10) Billets melt and pipes/tubes manufactured in China
- (11) All tubes 100% PMI tested
- (12) All tubes 100% Eddy Current tested

**CANNOT CERTIFY COMPLIANCE  
FAR BAA / DFARS BAA / FAR TAA**



By:

*James Shi*

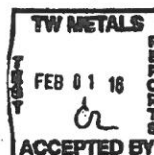
James Shi / Manager

Quality Control Department

We hereby certify that this report is true and correct.

**Shanghai Pufa Stainless Steel Pipe Factory**

No. 59, Shuangye Road, Wanggang, New Pudong District, Shanghai, China



*W*

## MILL TEST REPORT

Purchaser.: TW METALS-Cranbury				Certificate No.: 16-1-13					
Contract No.: TWM P.O.No.: M49342471				Date of Issue.: 2016.1.5					
Commodity: Stainless Steel Seamless Tubes				Specifications: ASTM A213-13c/ASME SA213-15/ASTM A269-15a EAW					
Process: Cold Drawn				Delivery Condition: OD Polished to 240 Grit					
Steel Grade	Heat Number	Lot Number	Dimensions			Quantity			
						Pieces	Feet		
TP304/TP304L	YX1501-783	11-63	3/4" x 0.049" x 20'			250	5,000		
Chemical Composition by Weight (%)									
Element	C	Mn	P	S	Si	Cr	Ni	Mo	Co
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	18.00-20.00	8.00-12.00	-	-
Ladle Analysis	0.012	0.68	0.031	0.001	0.37	18.35	8.05	-	-
Product Analysis	0.019	0.70	0.033	0.002	0.39	18.37	8.31	-	-
Mechanical Properties									
Test Item	Elongation (% in 2")		Tensile Strength (PSI) Rm			Yield Strength (PSI) Rp / 0.2%			
Requirements	≥35		≥75,000			≥30,000			
Test Results	65/66		89,000/90,000			34,000/35,000			
Test Item	Reduction of Area Z (%)	Hardness	Cold Bend Test	Flaring Test	Flattening Test	Flange Test	P.M.I. Test		
Requirements	-	HRB≤80	-	22%	e=0.09	-	-		
Test Results	-	75/77	-	Passed	Passed	-	OK		
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection				
Requirements	ASTM E 426	-	-	ASTM A262 E	End Cut	Appearance			
Test Results	Passed	-	-	OK	OK	OK			

ISO 9001:2008 Certified by Intertek 110703068

PED Certified by SZUTEST 2195-PED-1526002

## Additional Remarks:

- (1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes
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CANNOT CERTIFY COMPLIANCE  
FAR BAA / DFARS BAA / FAR TAA



By:

James Shi

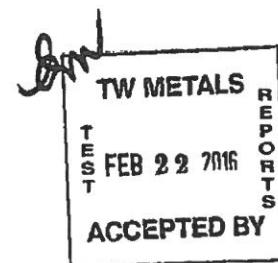
James Shi / Manager

Quality Control Department

We hereby certify that this report is true and correct.

Shanghai Pufa Stainless Steel Pipe Factory

No. 59, Shuangye Road, Wanggang, New Pudong District, Shanghai, China





A COMPANY OF MUELLER INDUSTRIES

PRECISION TUBE CO.  
287 WISSAHICKON AVE.  
NORTH WALES PA 19454

Control No: 4909

### CERTIFIED TEST REPORT

CUSTOMER PURCHASE ORDER NO.	CUST. ORD. NO.	PRECISION TUBE P/N
M 49373738 LINE 001	461694	24A031250580005

**SOLD:** TW METALS  
**TO** 175 TUBEWAY  
FOREST PARK, GA 30298  
UNITED STATES

**SHIP:** TW METALS  
**TO** 175 TUBEWAY  
FOREST PARK, GA 30298  
UNITED STATES

QUANTITY ORD.	DESCRIPTION	QTY. SHIPPED	DATE SHIPPED
3500 FT	METAL - 6061 ALUM TEMPER T6 SPEC - AMS 4082P ASTM-B-210-12 AMS-WW-T-700/6C LENGTH - 12 FT LGTH TOL +.1250 IN -.0000 IN SHAPE - ROUND FINISH - STRAIGHT EXACT LENGTHS OD .3125 +.0030 -.0030 ID WALL .0580 +.0040 -.0040	3648 FT	08/08/17

### MECHANICAL PROPERTIES

SAMPLE #	TENSILE STRENGTH (P.S.I.)	YIELD STRENGTH (P.S.I.)	ELONGATION IN 2 INCHES (%)	ROCKWELL HARDNESS	AVERAGE GRAIN SIZE (MM.)
1	46,136	40,185	18		

### DESTRUCTIVE TESTS

Comments: FAR BAA COMPLIES, DFARS BAA COMPLIES, FAR TAA COMPLIES

### NON-DESTRUCTIVE TESTS

EDDY CURRENT: PASS

### CHEMICAL COMPOSITION

ALLOY: 6061		HEAT:		TRACEABILITY #: 2289533					
				RAW MATL VENDOR: PTC11774 - KAISER ALUMINUM					
	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
Min	0.40		0.15		0.80	0.04			Rem.
Max	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	
OTHER ELEMENTS: 0.05 MAX EACH / 0.15 MAX TOTAL									

TEST REPORTS  
ACCEPTED BY  
49373738  
AUG 14 2017

TW METALS

DAS

We hereby certify that the material has been manufactured and tested in accordance with the requirements of the applicable specifications and descriptions set forth on Precision Tube's sales acknowledgement. During the manufacturing, testing and inspection, the product did not come into direct contact with mercury or any of its compounds, nor with any mercury containing device employing a single boundary containment. Test results indicate that the material is compliant with the current revision of the RoHS Directive (2011/65/EU).

Melted and Manufactured in USA  
QMS Registered to ISO 9001: 2008

By:   
Matthew Flynn-Hepford  
Quality Engineer

08/08/17

Page: 1 of 1

# KAISER ALUMINUM

FABRICATED PRODUCTS

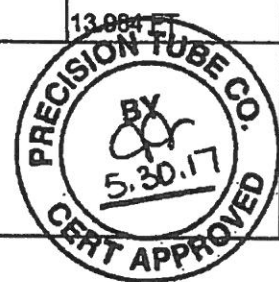
*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
2425 STEVENS DRIVE  
RICHLAND, WA 99352

CUSTOMER PO NUMBER: PTC11774		CUSTOMER PART NUMBER: SPIRIT-371850		PRODUCT DESCRIPTION: 5.400 LB/PC .500 LB/-0 LB 1.312 OD X .085 WALL ESRT	
KAISER ORDER NUMBER: 321818	LINE ITEM: 001	SHIP DATE: 05/26/2017	KAISER LOT NUMBER: 50751-362	ALLOY: 6061	TEMPER: O
WEIGHT SHIPPED: 8874.000 LB	QUANTITY: 1547.000 PCS	B/L NUMBER: 005368	DIAM/DAF/THKNS: 13.084 ET	WIDTH:	LENGTH:
SHIP TO:  PRECISION TUBE CO 287 WISSAHICKON AVENUE N. WALES, PA 19454 USA			SOLD TO:  MUELLER INDUSTRIES, INC PRECISION TUBE 8285 TOURNAMENT DRIVE STE. 150 MEMPHIS, TN 38125 USA		



### Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	%Elong in 2'	HARDNESS	CONDUCT.	BEND.
50751-362	0001	0001	18.3	5.6	26.7	N/A	N/A	N/A
50751-362	0001	0002	17.9	5.3	28.1	N/A	N/A	N/A
50751-362	0001	0003	18.6	6.3	25.0	N/A	N/A	N/A
50751-362	0001	0004	18.5	5.8	24.9	N/A	N/A	N/A
50751-362	0001	0005	19.0	6.5	24.6	N/A	N/A	N/A
50751-362	0001	0006	18.7	6.2	25.8	N/A	N/A	N/A
50751-362	0001	0007	18.2	5.5	27.5	N/A	N/A	N/A
50751-362	0001	0008	18.0	5.5	25.9	N/A	N/A	N/A
50751-362	0001	0009	18.3	5.8	24.9	N/A	N/A	N/A

### Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	.0
A20304	.58	.31	.22	.05	.99	.09	.06	.03	.00	.00	.00	.01	.02
A20302	.58	.29	.23	.05	.99	.09	.05	.02	.00	.00	.00	.01	.02

### Applicable Requirements:

ASTM-B241-16 NON-STENCILED ASTM-B221-14 ASTM-B345-11 AMS-QQ-A-200/8A TYPE I  
UNS#A96061 Also conforms to EN 10204 3.1

### Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA  
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY OF ITS COMPOUNDS ARE UTILITZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.

TEST REPORTS  
ACCEPTED BY  
49373738  
AUG 14 2017

TW METALS  
*Paula Harmon*

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

*Best in Class*

**CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
2425 STEVENS DRIVE  
RICHLAND, WA 99352

**CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

JOSEPH AMES, QUALITY MANAGER

*Jph*

TEST REPORTS  
ACCEPTED BY

AUG 14 2017

TW METALS  
*Quinn Hamner*

# KAISER ALUMINUM FABRICATED PRODUCTS

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
6573 W. WILLIS ROAD  
CHANDLER, AZ 85226

CUSTOMER PO NUMBER: M49365548-1		CUSTOMER PART NUMBER: 42276		PRODUCT DESCRIPTION: Drawn Seamless Tube/Pipe	
KAISER ORDER NUMBER: 222661	LINE ITEM: 001	SHIP DATE: 03/20/2017	KAISER LOT NUMBER: F00236125	ALLOY: 6061	TEMPER: T6
WEIGHT SHIPPED: 443.000 LB	QUANTITY: 388.000 PCS	B/L NUMBER: 224652	DIAM/DAF/THKNS: 	WIDTH: 	LENGTH: 12.000 FT
SHIP TO:  TW METALS INC 235 WEST TUBEWAY DRIVE CAROL STREAM, IL 60188 USA			SOLD TO:  TW METALS INC 760 CONSTITUTION DRIVE SUITE 204 EXTON, PA 19341 USA		

### Actual Physical Properties

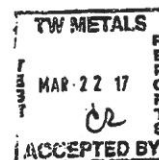
REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CON% IACS	BEND
F00236125	0001	1	46.7	41.1	17.0	N/A	N/A	N/A
F00236125	0002	1	46.2	40.9	18.0	N/A	N/A	N/A

### Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
D76510	.62	.23	.23	.05	.99	.07	.07	.02	.00	.00	.00	.01	.02

### Applicable Requirements:

Description: OD: 0.5000"; Wall: 0.0580"; Round @  
AMS4082P AMS-WW-T-700/6C ASTM B210-12 WW-T-700/6F  
WE TAKE EXCEPTION TO PARA. 5.2.1., Per AMS4082P, WAS NOT OILED.  
This Product Complies to FAR BAA, DFARS BAA, FAR TAA  
COMPLIES TO DIN EN 10204 JAN 2005  
No Weld Repair. Mercury Free.



### Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA  
MATERIAL COMPLIES WITH FAR BAA (FAR 52.225-1, BUY AMERICAN ACT- SUPPLIES), DFARS BAA  
(DFARS 252.225-7001 BUY AMERICAN ACT & BAL OF PAYMENTS PROG), AND FAR TAA (FAR 52.225-5  
TRADE AGREEMENTS).

Plant Serial: 00024461  
Kaiser Order Number: 222661  
Line Item: 001

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
6573 W. WILLIS ROAD  
CHANDLER, AZ 85226

**CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

**CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file subject to examination.

Hans Kattentidt, Quality Manager



C





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO37862**

Purchase Order Date 9/25/2017

PO Print Date 9/25/2017

Page Number 1 of 4

**Order From :**

VU-TWM001

TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**E-MAILED**  
**SEP 25 2017**

**Contact Name**

**Vendor Phone** 585 768 5600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** YRC COLLECT

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

USD

**FOB**

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	M2024T3T1.000W.065	2024T3 Tubing 1" OD x 0.65" Thick	10/6/2017 Yes 10/6/2017		36.00 f	\$7.50	\$270.00
AS PER MATERIAL 2024-T3 ROUND TUBING, MAT'L SPEC'S AMS-QQ-A-250/4							

**Line Total:** \$270.00

3	M304TR0.500W.035	304 RD Tube .500 x .035W	10/6/2017 Yes 10/6/2017		20.00 f	\$1.50	\$30.00
---	------------------	--------------------------	-------------------------------	--	------------	--------	---------

MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING  
AS PER ASTM A213 OR AMSE SA213 OR ASTM A269

88 17-10-18

**Line Total:** \$30.00

**Note:**

9/25/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO37862**

Purchase Order Date 9/25/2017

PO Print Date 9/25/2017

Page Number 2 of 4

**Order From :**

VU-TWM001

TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 585 768 5600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** YRC COLLECT

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms** Net 30

**Currency** USD

**FOB** FCA - (Free Carrier)

4	M304TR0.500W.049	304 RD Tube .500 x .049W	10/6/2017	20.00		\$2.80	\$56.00
			Yes	f			
			10/6/2017				

MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING  
AS PER ASTM A213 OR AMSE SA213 OR ASTM A269

**Line Total:** \$56.00

5	M304TR0.750W.049	304 RD Tube .750 x .049W	10/6/2017	160.00		\$2.10	\$336.00
			Yes	f			
			10/6/2017				

MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING  
AS PER ASTM A213 OR AMSE SA213 OR ASTM A269

**Line Total:** \$336.00

6	M6061T6T0.3125W.058	ALUM TUBE .3125 x .058w	10/6/2017	60.00		\$2.50	\$150.00
			Yes	f			
			10/6/2017				

MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING  
AS PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR  
AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR  
ASTM B241

SPA-10-18

**Note:**

9/25/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO37862**

Purchase Order Date 9/25/2017

PO Print Date 9/25/2017

Page Number 3 of 4

**Order From :**

VU-TWM001

TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 585 768 5600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** YRC COLLECT

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms** Net 30

**Currency** USD

**FOB** FCA - (Free Carrier)

**Line Total:** \$150.00

7 M6061T6T0.375W.058 6061-T6 RD Tube .375 10/6/2017  
x.058W

Yes

10/6/2017

MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING  
AS PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR  
AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR  
ASTM B241

100.00 \$2.15 \$215.00

**Line Total:** \$215.00

8 M6061T6T0.500W.058 6061-T6 RD Tube .500 10/6/2017  
x.058W

Yes

10/6/2017

MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING  
AS PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR  
AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR  
ASTM B241

100.00 \$1.75 \$175.00

**Line Total:** \$175.00

**Note:**

9/25/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO37862**

Purchase Order Date 9/25/2017

PO Print Date 9/25/2017

Page Number 4 of 4

**Order From :**

VU-TWM001

TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

**Ship To :** DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 585 768 5600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** YRC COLLECT

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms** Net 30

**Currency** USD

**FOB** FCA - (Free Carrier)

9	71401-45	PROCUREMENT QUALITY CLAUSES	10/6/2017	1.00	\$0.00	\$0.00
---	----------	--------------------------------	-----------	------	--------	--------

No

Procurement Quality Clauses  
A005 right of entry  
A012 chemical and physical test report  
A016 personnel qualification  
A017 raw material identification  
A026 certification of material conformance  
A041 quality management system  
A042 dart notification by supplier  
A043 retention of quality documents

10/6/2017

8A-10-18

**Line Total:** \$0.00

**PO Total:** \$1,232.00

CL

**Note:** Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

**Change Nbr:** 1

**Change Date:** 9/25/2017

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 1202473T1.000W.065

PO / BATCH NO.: 37862 / 3000955

DATE: 12.11.15

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 36  
 QUANTITY INSPECTED: 36  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .065  
 THICKNESS RECEIVED: .065  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	ASTM B210-12
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	F00201243
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 9 3.88</u> DATE: <u>12.11.15</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

1.000 w.065

PURCHASE MATERIAL: 6081-16/762/76510/76511 SEAMLESS TUBING

SPECIFICATION:

WM-T-7008  
OR QQ-A-200/8 OR QQ-A-225/8  
OR AMS 4080 OR AMS 4082 OR AMS 4083  
OR ASTM B210 OR ASTM B241

PART NUMBER:

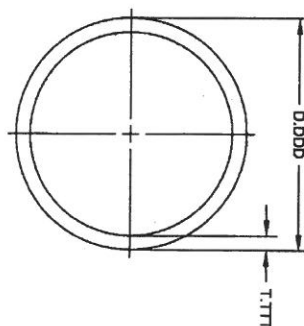
M6061T6T D.DDDW/T.TTT  
OD | WALL

WHERE "D.DDD" = OD IN INCHES  
"T.TTT" = WALL THICKNESS

EG. 3/8" OD X 0.059 WALL = M6061T6T0.375W0.059

MATERIAL TOLERANCE:

PER ANSI H35.2



C	COMPLETE REFORMAT. ADDED T6510 & T6511. ADDED AMS 4083, ASTM B210 & ASTM B241	AMS	13.06.12
B	ADD QQ-A-200/8 & QQ-A-225/8	CP	04.01.23
A	NEW ISSUE	DS	01.06.21
REV.	DESCRIPTION	BY	DATE
DESIGN	ALIS		
DRAWN	ALIS		
CHECKED	4		
MFG. APPR.	M6061T6T		
APPROVED	TITLE		
DE APPR.	6081-16 TUBING		
DATE	13.06.12		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA  
REV. C  
SHEET 1 OF 1  
SCALE  
NTS

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RELEASED  
2013-07-02  
MWD

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M 304TRO.500W.049

PO / BATCH NO.: PO 37862

DATE: 17/11/09

5000957

MATERIAL CERT REC'D: yes

THICKNESS ORDERED: .500 W.049

QUANTITY RECEIVED: 20'

THICKNESS RECEIVED: .497 W.047

QUANTITY INSPECTED: 20'

SHEET SIZE ORDERED: N/A

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORROSION	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	ASIM A213
CORRECT THICKNESS	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	.497 W.047
PHOTO REQUIRED	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	Heat # PX 1506712
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	5000957
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	M 304TRO.500W.049
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.  
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

<p>QC 18 INSPECTION</p> <p style="text-align: center;"><b>DAS</b></p> <p>INSPECTED BY: <u>48</u></p> <p>DATE: <u>17/11/09</u></p>	<p>ENGINEERING SIGNOFF (if required)</p> <p>SIGNED OFF BY: _____</p> <p>DATE: _____</p>
---	---

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304TRO.750 W.049

PO / BATCH NO.: PO 37862

DATE: 17/11/09

5000958

MATERIAL CERT REC'D: yes

THICKNESS ORDERED: .750 W.049

QUANTITY RECEIVED: 160'

THICKNESS RECEIVED: .744 W.047

QUANTITY INSPECTED: 160'

SHEET SIZE ORDERED: N/A

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	N	ASTM A213
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	.744 W.047
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	Heat # YX1501783
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	M304TRO.750 W.049
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	5000958
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.

RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

<p>QC 18 INSPECTION</p> <p style="text-align: center; font-weight: bold;">DAS 48</p> <p>INSPECTED BY: <u>9-89</u></p> <p>DATE: <u>17/11/09</u></p>	<p>ENGINEERING SIGNOFF (if required)</p> <p>SIGNED OFF BY: _____</p> <p>DATE: _____</p>
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Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 1160617610304.053

PO / BATCH NO.: 51862 / 5000959

DATE: 11.11.15

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 60'  
 QUANTITY INSPECTED: 60'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .053"  
 THICKNESS RECEIVED: .053"  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	ASTM-A210
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	2237533
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>Das</u> <u>9</u> DATE: <u>11-11-15</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

312 w. 053

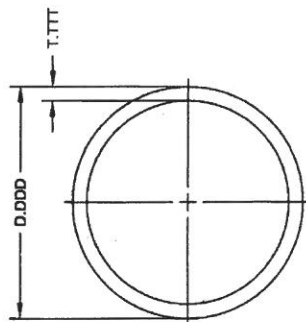
PURCHASE MATERIAL: 6061-T6/7050-T6/7051 SEAMLESS TUBING

SPECIFICATION: WW-T-700/8  
OR QQ-A-200/8 OR QQ-A-225/8  
OR AMS 4080 OR AMS 4082 OR AMS 4083  
OR ASTM B210 OR ASTM B241

PART NUMBER: M6061T6TDDDDWTTT  
OD | WALL

WHERE "D.DDD" = OD IN INCHES  
"T.TTT" = WALL THICKNESS  
EG. 3/8" OD X 0.058 WALL = M6061T6T0.375W0.058

MATERIAL TOLERANCE: PER ANSI H35.2



RELEASED  
2013-07-02

C	COMPLETE REFORMAT, ADDED T6510 & T6511. ADDED AMS 4083, ASTM B210 & ASTM B241 ADDED MATERIAL TOLERANCE	AJS	13.06.12
B	ADD QQ-A-200/8 & QQ-A-225/8	QF	04.01.23
A	NEW ISSUE	DS	01.08.21
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	AJS		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	13.06.12		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
REV. C DRAWING NO. M6061T6T SHEET 1 OF 1			
TITLE 6061-T6 TUBING SCALE NTS			
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## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061T6T0.5000.058

PO / BATCH NO.: 37862/3000960

DATE: 11-11-15

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 108'  
 QUANTITY INSPECTED: 108'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .058"  
 THICKNESS RECEIVED: .058"  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	<u>ASME B210-12</u>
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	<u>F00236250001</u>
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.  
 RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>Das</u> <u>9</u> DATE: <u>11-11-15</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

500W053

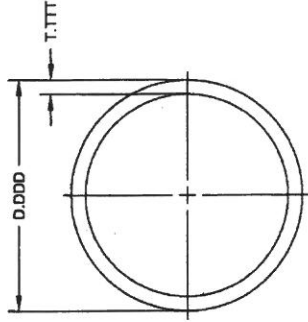
DAS  
9  
9-AC

PURCHASE MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING

SPECIFICATION:  
WW-T-700/8  
OR QQ-A-200/8 OR QQ-A-225/8  
OR AMS 4080 OR AMS 4082 OR AMS 4083  
OR ASTM B210 OR ASTM B241

PART NUMBER: M6061T6T[D.DDD]WT.TTT  
OD | WALL

WHERE "D.DDD" = OD IN INCHES  
"T.TTT" = WALL THICKNESS  
EG. 3/8" OD X 0.058 WALL = M6061T6T0.375W0.058  
MATERIAL TOLERANCE: PER ANSI H35.2



RELEASED  
2013-07-02

C	COMPLETE REFORMAT, ADDED T6510 & T6511, ADDED AMS 4083, ASTM B210 & ASTM B241, ADDED MATERIAL TOLERANCE	AJS	13.06.12
B	ADD QQ-A-200/8 & QQ-A-225/8	CP	04.01.23
A	NEW ISSUE	DS	01.06.21
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	AJS		
CHECKED	W		
MFG. APPR.	W		
APPROVED	W		
DE APPR.	W		
DATE	13.06.12		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. REV. C			
M6061T6T SHEET 1 OF 1			
TITLE SCALE			
6061-T6 TUBING			
NTS			
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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304TRO.500W.035  
 DATE: 17/11/09

PO / BATCH NO.: PO 37862  
5000956

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 20'  
 QUANTITY INSPECTED: 20'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 500 W.035  
 THICKNESS RECEIVED: .499 W.037  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y N	
CORROSION	Y <input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y N	ASTM A213
CORRECT THICKNESS	<input checked="" type="radio"/> Y N	.499 W.037
PHOTO REQUIRED	Y <input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y N	Heat# YX1608590
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y N	M304TRO.500W.035
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y N	5000956
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

QC 18 INSPECTION <span style="float: right;">DAS</span> <div style="text-align: center; font-size: 1.5em; font-weight: bold;">48</div> INSPECTED BY: <u>9-89</u> DATE: <u>17/11/09</u>	ENGINEERING SIGNOFF (if required) SIGNED OFF BY: _____ DATE: _____
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Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in